

ticket; that only ten were admitted at a time, and that only three hours were allowed to see the whole collection. The regulations by which access was hampered and made purposefully difficult, stand out in strong contrast indeed with the free and unrestricted access for all classes now enjoyed by thousands instead of by tens.

The Solar System; or the Sun, Moon, and Planets. By J. R. HIND, Foreign Secretary of the Royal Astronomical Society of London, &c. London: Orr and Co. Amen-corner.

A book on astronomy for a shilling, by a well-known and approved astronomer! It is a small book doubtless, but all the more valuable to the general reader on that account. Moreover, although it contains much less on any one point than larger books do, it is a well-condensed epitome, which, we happen to note, actually contains points of information for which we have searched in vain through larger works. The volume forms one of a shilling series of "Readings in Popular Literature," published by Messrs. Orr and Co. of which "The World in its Workshops," as our readers may recollect, is one.

Miscellanea.

CONTENTMENT.—"Be seized, dear friend, with a very dreadful idea of your own sufficiency. Distrust your own competency to walk straight; your own ability to detect shams from realities; your own power to see, even from one moment to another, what is best for you. Groan not so for the good things of this life, because it happens to be the fashion. Fill not so your mind with golden visions; long not so intensely for those one or two little things which, you think, after all, fate might really accord you. Above all, be more disposed to regard the wheelbarrow than the coach and four, the table spread with bread and cheese, than the banquet-board groaning with its plate. If you sleep well, be happy! Remember, men lead two lives, his days and his dreams; and if you are safe as to the latter, accept the former as the very best which could be allotted you. Depend upon it, my-not-altogether-hopelessly-wicked reader, that the only things which are worth attention in this world are those nearest at hand; and that, if you have a clear mind, a small opinion of yourself, and good resolutions, you are as happy as a prince, ay, and as powerful too!"—*Hargrave Jennings, in Military Magazine.*

RICHMOND, SURREY.—Steps have been taken here towards the rebuilding of the Independent Chapel destroyed by a fire in August last. The committee, considering it a good opportunity of affording a greater amount of accommodation in sittings than was obtained in their old place, which only held 400 sitters, came to the determination of erecting a building capable of holding 800 persons, with the addition of larger schools. The plan of the proposed new building is a parallelogram, and the style chosen is Decorated Gothic. It will be 68 feet 6 inches by 40 feet in the clear, and is divided into six bays by buttresses, between which will be two light windows of varied design. The front elevation will be divided by a buttress running up the whole height, supporting a bell turret, which will spring from carved corbels. The interior will be provided with low benches without doors. Behind the chapel a lecture-room will be provided, 30 feet by 18 feet, with minister's vestry, and other conveniences. Underneath, school and class rooms, 12 feet in height, will be placed for day and Sunday schools. It is proposed to erect the whole of the buildings of brick, faced with Bargate stone, with Bath stone dressings. Mr. J. James is the architect.

IMPROVEMENT IN GLASS MANUFACTURE.—Edwin Deeley and Richard Mountford Deeley, of the Dial glass-house, have recently enrolled a patent for certain improvements. Their claims for "the construction of furnaces the manufacture of glass, with grates having inclined bars or perforated plates situate and arranged so that the flame may play directly on the pots."

ON TRUE PRINCIPLES IN ARCHITECTURE.—At a meeting of the Oxford Architectural Society, on the 18th ult. Mr. Street read a paper on "True Principles in Architecture, and the possibility of a development founded thereon." According to a local journal, he showed how that for the last three hundred years all true principles had been ignored; each man's caprice being his rule in defiance of all laws either of construction or art. The great law at the bottom of all good art is truth, which by no means excludes religion, but is more applicable as a law, and on this all development must be founded: he would assume, therefore, first that in good architecture whatever is truthful must of necessity be in itself proper and good, though it have no old precedent in its favour, and second, that no development can be good which does not proceed upon this principle. The absence of a desire to develop had led men to imagine that our only object was to restore a dead style; whereas had we seized on the principles of that style, and worked buildy, we should soon have improved. In all architecture the first principles are constructional, and none could be good in which this was not the case, and as the Pointed arch is the greatest invention in construction that has ever been achieved, it follows that all imitations of classic architecture are barbarous and bad. The opportunities for development are various: first, by examination of foreign examples, the true view of these being that they are so many developments from the one great fact of the Pointed arch, not that they are the development best suited to the countries in which they are found, though this is often true of mouldings and so forth. Nor should we stop here, but classical buildings should also be examined, in order to see whether any beauties existed in them which might be available for all time. He argued in favour of the horizontal line, instancing the method of its use in Italian and Greek pointed churches, and proving from instances in England that it was not opposed to the principles of the style, and that it was eminently constructional; the modern method of quoining dark buildings with light stone being bad, because it does not look constructive!

TRAFFIC OVER WESTMINSTER BRIDGE.—On Saturday I counted the carriages which pass my door going to and coming from Westminster-bridge: they were about 500 per hour, and as the grinding of the way scarcely ceases till two or three o'clock in the morning, and begins again at five o'clock, you may readily admit that 10,000 of all sorts of carriages pass over Westminster-bridge daily, of which Parliament-street gets so large a share that new granite stones laid on it scarcely show the places where they were laid on the next day. Does not this immense traffic point out the necessity of an additional bridge, and in the meantime a better regulation of the old bridge? Suppose the bridge were lighted in the middle, and carriages obliged to go only one way over the parts, the footways narrowed 1 foot 6 inches each to be given to the carriage way, and foot passengers obliged to go on one side proceeding and on the other side on returning: this order would give abundance of additional convenience.—O

STEAM DIGGING MACHINE.—A patent has been enrolled for George Guthrie, Rephail, Stranraer, for a machine, which is described as imitating spade labour.

SUSPENSION BRIDGES.—We have not unfrequently felt it our duty, without meaning to excite any alarm on the subject, to draw attention to circumstances ever and anon occurring which tend to diminish confidence in suspension bridges as heretofore constructed. We now learn that the new one, not yet finished, at Portland-street, Glasgow, has already shown signs of insecurity in one of its towers; and that the bridge at Feuchan, in Argyleshire, was destroyed by floods on 5th ult. As remarked in the *Bath Journal*, in reference to these circumstances, few of the bridges built on this principle have escaped some serious disaster. The late Lord Western contended that they contained the elements of their own destruction, increasing according to the increase of their length.

RAILWAY JOINTING.—The first suspension tube for the bridge over the Wye, at Chepstow, has been tested by a weight of 1,100 tons attached to it. By the first week in April one of the lines of rail will be opened for traffic. The bridge combines the Britannia tubular and Mason suspension principles. Mr. Stephenson, it is said, has inspected the bridge, and concurred in the plan adopted by Mr. Brunel. The viaduct at Hoo Brook, near Kidderminster, is now complete, except the hand-rails. Mr. Holloway, the sub-contractor, and his assistants have put it together in five months. It is made entirely of wood, with the exception of stone abutments and iron bolts and castings. The bridge has twenty-two openings, each 51 feet from the centres of the abutments, and thus it is 1,122 feet in total length. The stone intermediate abutments are about 10 feet in height: upon each abutment five legs of timber, each 40 feet long and 24 by 14 inches thick are reared, and these support the platform through the medium of trusswork. The height of the viaduct will vary, according to the level below it, from 60 to 69 feet. The timbers and castings are much weaker than in some viaducts of this kind. The timber has been put through a preserving process in Mr. Fredwell's yard at Gloucester. The abutments which support the ends of the viaduct are of stone, and the trussing rests upon arches. In consequence of an alteration in the original plan of the bridge, these arches were lowered 5 feet, in order to give strength to the trussing by rendering the "struts" more vertical in their position. The sub-contractor has hurried his work in order to open a passage for the contractor's engine and waggons to the northern end of the line.

FIRES IN CHURCHES.—That fertile source of mischief, overheated flues, has of late placed some important buildings in jeopardy. On Sunday last, St. Margaret's Church, Westminster, immediately adjoining Westminster Abbey, and directly opposite the Houses of Parliament, was fired by a red-hot flue during Divine worship. The headie had the discretion and the nerve to allow the service to go quietly on while he ordered out the parish engines, got out the fire-ladders, tore up 20 feet of the coping stone with the aid of ten or twelve men, and with fifty pails of water, put out the fire before a soul in the interior knew anything about it, although a crowd of people witnessed what was going on outside. We need hardly say, that had the slightest indiscretion led to the betrayal of the fact within doors, however paltry the occasion might have been, the lives of some at least would have been sacrificed in the certain rush to get out.

—At St. Peter's-in-the-East, Oxford, on the Sunday before last, a sermon had been preached in the forenoon to aid in raising funds to pay for a new flue and stove for heating the church; and, in the afternoon of the same day, the same flue became overheated and set fire to "a wooden coal-box which stood on the top of it." The fire extended, and but for prompt measures, the flames from the blazing pews would have spread over the whole body of the building and reduced it to ruin. The carelessness displayed in dealing with flues is scarcely credible.

COST OF THE ENGINEERS' STRIKE.—Not fewer than 20,000 men have been out of work since 10th of January: average earnings at 25s. per week, 175,000l. About 2,000l. weekly, or 14,000l. have been expended in supporting the unemployed; thus making a total of 189,000l. In addition, great loss must have resulted to employers from the inactivity of their machinery, &c.; and altogether, it is thought, says the *Observer* of last week, that up to the end of the week, from 200,000l. to 210,000l. would be a fair estimate of the loss entailed upon different parties by the engineers' strike. On March 1st, 5,000 men had signed the masters' declaration in Manchester, and were at work.

DISTRICT OF WHITECHAPEL.—On the 26th February Mr. Harry Oliver was elected surveyor to the district of Whitechapel, by sixty votes. The other candidates were Mr. Cantwell (forty-six votes), Mr. Hill, and Mr. Eales.